

3. DESCRIPTION OF SOME NEW SPECIES OF SPOGGODES AND OF A NEW ALLIED GENUS (MORCHELLANA) IN THE COLLECTION OF THE BRITISH MUSEUM. BY DR. J. E. GRAY, F.R.S., V.P.Z.S., F.L.S., ETC.

(Plate IV.)

The genus *Spoggodes* was established by Lesson on a coral that was described by Esper under the name of *Alcyonium floridum*. It is characterized by the whole of its substance being membranous, very loosely cellular within, and covered externally with a layer of fusiform spicula which are most abundant round the cells.

M. Milne-Edwards, in his 'Coralliaires,' only describes a single species.

The species of the genus in the British Museum may be divided into two groups or subgenera.

I. *The polypes crowded together at the end of the branchlet, and the groups more or less surrounded by larger spicula of the branchlet.* Spoggodes.

1. SPOGGODES FLORIDA. (Pl. IV. figs. 1, 2, 3, 4.)

The coral pale purplish-red (in spirits); stem thick, much branched, strengthened with very slender elongate purple spicules; the branchlets short, clustered at the end of the branches, and forming convex heads or cells; cells fringed with the very slender elongated spicules, and furnished with white, only partially contracted, polypes.

Alcyonium floridum, Esper, Pflanz. iii. 49, *Alcy.* t. 16, dry.

Xinia purpurea, Lamk. Hist. A. s. V. ii. 401, from Esper.

Neptea florida, Blainv. Man. Act. 523, from Esper.

Spoggodes celosia, Lesson, Ill. Zool. t. 21; M.-Edwards, Coralliaires, i. 129, t. B 1. f. 1.

Spoggodea celosia, Dana, Zoophytes, 626, t. 59. f. 4.

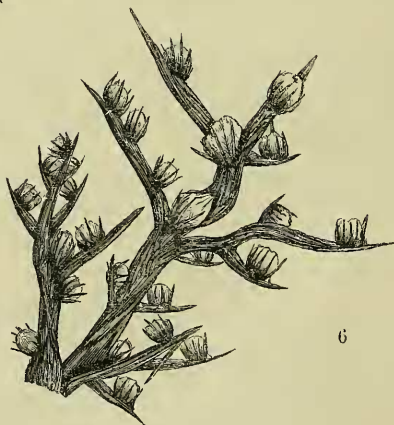
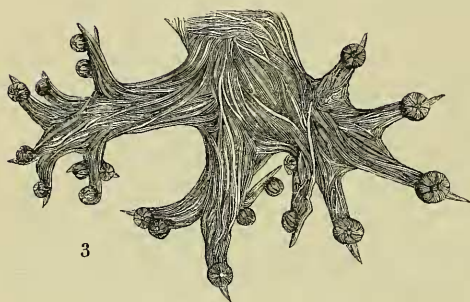
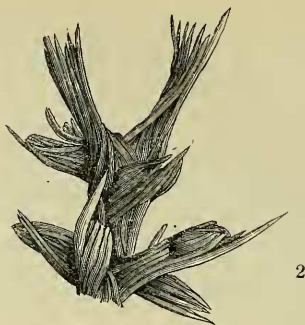
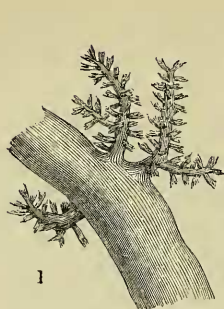
Hab. Australia; Sharks' Bay (*Mr. Rayner*); Philippine Islands (*H. Cuming, Esq.*).

2. SPOGGODES SPINOSA. (Pl. IV. figs. 5, 6, 7.)

The coral whitish, forming roundish spinose masses; the stem thick, slightly branched, with very numerous short branchlets; the spicules white, very unequal, some large and thick; the terminal branchlet furnished, on the inner upper edge, with curved (in spirits) partly retracted purple polypes, which are surmounted and protected by the large opaque-white spicules of the branchlets.

Hab. New Guinea.

This species is easily distinguished by the large size and opaque-white colour of the spicula and the purple colour of the polypes.



II. *The polypes isolated in the prominent isolated spiculose sub-cylindrical cells, scattered on the sides, or forming tips of the branchlets.* Spoggodia.

3. SPOGGODES UNICOLOR. (Woodcut, figs. 1, 2.)

The coral uniform, pale yellowish (in spirits); the spicules very slender, whitish yellow; stem erect; branches scattered in all directions, spreading, tapering, with few short tapering branchlets; cells distinct, distant, spreading, subcylindrical, sometimes very slightly contracted at the base; mouth surrounded by five or six unequal prominent spicules, the one on the outer side of the cell being generally the longest; polypes retractile.

Hab. Bellona Reefs, in 17 fathoms (Rayner).

4. SPOGGODES DIVARICATA. (Woodcut, figs. 3, 4.)

Coral pale whitish (in spirits); stem thick, slightly branched, with very numerous crowded ramuli forming roundish lobes; the ramuli divided at the top into three or five diverging cylindrical cells; the cells of the several branchlets forming a sort of roundish-topped cyme; polypes contracted (in spirits), rose-coloured.

Hab. New Guinea (Capt. Sir Edward Belcher, R.N., C.B.).

5. SPOGGODES RAMULOSA. (Woodcut, figs. 5, 6.)

The coral dark brown-red (in spirits); stem thick, much branched, strengthened by slender, elongated, fusiform, dark-brown-red spicules; the branchlets numerous, elongate, slender, much branched, with the cells scattered on their sides; cells distant, subcylindrical, and fringed on the edge with unequally prominent spicules, the outer spicules being generally the longest and most prominent; the polypes pale yellowish, being generally nearly contracted into the cells, rarely prominent.

Hab. Bellona Reefs, at 17 fathoms.

Some of the polypes on the lower part of the branchlets seem to be somewhat crowded. This species is easily known from *S. florida* and *S. unicolor* by the general colour of the coral and by the slenderness and length of the branchlets. It agrees with the former in the coral and spicules being red, and the polypes being more or less prominent and of a different colour from the coral, and with the latter in form of the cell; but the cells are very differently disposed, and of a slender, attenuated form.

We have in the British Museum a new form of the "Alcyoniens armés" of M. Milne-Edwards (Coralliaires, vol. i. p. 127), which, in my idea, form a family that may be called *Nepthyadæ*.

This coral differs from the three genera of this family mentioned by Milne-Edwards, in the lower part or stem being coriaceous and destitute of any spicules, and in the upper part being spiculose, and furnished with short clusters of polype-cells, giving it much the appearance of the *Fungi* called *Morchella* and *Helvella*.

MORCHELLANA.

The coral subclavate, coriaceous, subcalcareous, and loosely cellular within; the stem subcylindrical, elongate, hard, coriaceous, and minutely granular on the surface.



The head formed of numerous, irregularly dispersed, short-lobed prominences, which are covered at the end with diverging conical prominent polype-cells,—the lobes and cells being strengthened with superficial fusiform spicules, slightly covered with the skin of the coral; the polypes entirely retractile.

The whole substance of the coral is loosely cellular, and the lobes of the head are brittle and easily broken off when in spirits. The base of the stem is furnished with some large tubular fibres, which seem to act as roots to attach it to rocks.

The spicules on the edge of the polype-cells are rugulose or spinulose.

MORCHELLANA SPINULOSA. (Woodcut, p. 30.)

Hab. Indian Ocean.

4. NOTES ON SOME SPECIMENS OF CLAVIFORM PENNATULIDÆ (VERETILLEÆ) IN THE COLLECTION OF THE BRITISH MUSEUM. BY DR. JOHN EDWARD GRAY, F.R.S., V.P.Z.S., F.L.S., &c.

Since my paper, entitled "Revision of the Family *Pennatulidæ*," with description of some New Species in the British Museum," was printed in the 'Annals and Magazine of Natural History' for January 1860, we have received several specimens of club-shaped Sea-Pens (*Veretilleæ*) which further illustrate the species of this group.

Professor Milne-Edwards, in the first volume of his 'Coralliaires,' published in 1857, divides the Claviform *Pennatulæ* into three genera, thus—

1. LITUARIA, with a distinct, well-developed, quadrangular central stony axis.
2. VERETILLUM, with a rudimentary hard central axis.
3. CAVERNULARIA, without any hard central axis, but with four large longitudinal central cells.

Dr. Herklots, in his "Monograph of the *Pennatulidæ*," in the 'Bijdragen tot die Dierkunde' for 1858, divides them into four genera, adding the genus *Sarcobelemnon* to the above list. The species of *Lituaria* and *Sarcobelemnon* are found in the Indian and Australian Oceans, and those of *Veretillum* and *Cavernularia* are confined to the Mediterranean.

The *Veretilleæ* in the British Museum appear to belong to only two genera, viz.—

1. VERETILLUM. The club with a short thick base, with four more or less large longitudinal cells in the centre.
2. LITUARIA. The club with an elongated base, and with a strong, subquadrangular, central, more or less stony axis.

The former group seems to be synonymous with the genera *Veretillum* and *Cavernularia* of Milne-Edwards and *Sarcobelemnon* of Herklots. I call the first genus by the name *Veretillum*, because I find that the specimen of *Pennatula cynomorium* which we have in the British Museum does not appear to have any rudiment of an axis, and has the four large longitudinal cavities in the centre of the coral